

Sub B1
24. (new) A method of treating or preventing mycobacterial disease in an animal or human which method comprises vaccinating said animal or human against a polypeptide selected from:

- (i) a polypeptide according to SEQ ID NO: 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
- (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope.

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25. (new) A method according to claim 24 which method comprises vaccinating or treating said animal or human with an effective amount of a polypeptide selected from:

- (i) a polypeptide according to SEQ ID NO: 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
- (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope.

26. (new) A method according to claim 24 which method comprises vaccinating or treating said animal or human with an effective amount of a polynucleotide capable of expressing a polypeptide selected from

- (i) a polypeptide according to SEQ ID NO: 24;
 - (ii) a polypeptide comprising a polypeptide according to (i);
 - (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
 - (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope.
- or an expression vector comprising any such polynucleotide.

27. (new) A method according to claim 26 wherein said polynucleotide is selected from:

- (i) a polynucleotide according to SEQ ID NO: 23;
- (ii) a polynucleotide comprising SEQ ID NO: 23;
- (iii) a fragment of a polynucleotide of (i) or (ii); or
- (iv) a polynucleotide having at least 90% homology to a polynucleotide of (i), (ii) or (iii).

28. (new) A method according to claim 24 for increasing the in vivo susceptibility of mycobacteria to antimicrobial drugs.

29. (new) A method according to claim 24 further comprising the step of monitoring or detecting the response of said animal or human to said vaccination.

30. (new) A method according to claim 29 wherein said response is monitored over the course of said vaccination.

31. (new) A method according to claim 29 wherein said response is monitored following a course of vaccination.

32. (new) A method according to claim 29 comprising the step of detecting the presence or absence of an immune reaction against said polypeptide in said animal or human.

33. (new) A method according to claim 29 comprising the step of detecting the presence or absence of an antibody against said polypeptide in said animal or human.

34. (new) A method according to claim 33 wherein said antibody is detected by a method comprising providing a polypeptide selected from:

- (i) a polypeptide according to SEQ-ID NO. 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
- (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope;

providing a sample from said human or animal; incubating said sample with said polypeptide under conditions which allow for the formation of an antibody-antigen complex; and determining whether any antibody-antigen complex comprising said polypeptide is formed.

35. (new) A method according to claim 34 wherein said sample is selected from blood, milk and saliva.

36. (new) A method according to claim 34 wherein said polypeptide carries a revealing label.

37. (new) A method according to claim 34 wherein said polypeptide is immobilized on a solid support.

38. (new) A method according to claim 29 comprising the step of detecting cell mediated immune reactivity against said polypeptide in said animal or human.

39. (new) A method according to claim 38 wherein cell mediated immune reactivity is detected by a method comprising providing a polypeptide selected from:

- (i) a polypeptide according to SEQ ID NO: 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or

(iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope;

wherein said polypeptide comprises an epitope; incubating a cell sample with said polypeptide under conditions which allow for a cellular immune response; and detecting the presence of a cellular immune response in the incubate.

40. (new) A method according to claim 39 wherein said cellular immune response is the release of a cytokine or other mediator.

41. (new) A method according to claim 39 wherein said polypeptide carries a revealing label.

42. (new) A method according to claim 39 wherein said polypeptide is immobilised on a solid support.

43. (new) A method of monitoring or detecting the response of an animal or human to vaccination against a polypeptide selected from

- (i) a polypeptide according to SEQ ID NO: 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
- (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope;

comprising the step of detecting the presence or absence of an antibody against such a polypeptide in a sample from said animal or human.

44. (new) A method according to claim 43 wherein said antibody is detected by a method comprising providing a polypeptide selected from:

- (i) a polypeptide according to SEQ ID NO: 24;
- (ii) a polypeptide comprising a polypeptide according to (i);
- (iii) a polypeptide having at least 70% amino acid identity to a polypeptide of (i) over 30 or more contiguous amino acids; or
- (iv) a fragment of a polypeptide of (i) comprising at least 12 amino acids and an epitope;

providing a sample from said human or animal; incubating said sample with said polypeptide under conditions which allow for the formation of an antibody-antigen complex; and determining whether any antibody-antigen complex comprising said polypeptide is formed.

45. (new) A method according to claim 44 wherein said sample is selected from blood, milk and saliva.

46. (new) A method according to claim 44 wherein said polypeptide carries a revealing label.